2.0 User Manual

www.amarraaudio.com

Thank you!

Thank you for purchasing the Amarra Computer Music Player. You are about to enjoy the Ultrafidelity™ sound of Amarra. Designed to work with your Apple™ MacIntosh Computer and with iTunes, Amarra provides a seamless integration for high resolution music playback.

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The Amarra Computer Music Player User Guide, December 2009

1. Contents:

This document details the installation of Amarra and its associated software:

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The Amarra installer will install the following items on to your Macintosh Computer:

- Amarra Computer Music Player
- Amarra iTunes Plugin
- Amarra Fonts
- PACE iLok extension
- Amarra Documentation
- FLAC Component

2. Minimum System Requirements:

Computer:

- Any Intel–based Mac (Preferred)
- PPC (G5) Mac (NOTE: WAV and AIFF files only. Compressed audio formats are not supported)
- RAM: 3 GB mum

Supported Audio Hardware Interfaces:

- Please visit the Supported Hardware section of www.amarraaudio.com

Software:

- Mac OS X 10.5 and above recommended
- Amarra
- iTunes

Note that USB hubs, audio or optical disc peripherals are not supported.

Peripheral FireWire Adaptors supported:

- OHCI compliant PCCard, PCI card, ExpressCard or PCIe card

Software:

- Mac OS X 10.4.11 (has playback lmitiations) or 10.5.8 and above recommended
- Amarra
- iTunes

We highly recommend a fresh install of the operating system on a clean disc. This can prevent problems later on.

We also highly recommend that your computer be used exclusively for music playback. Email, web browsers, screen sharing and other applications can all affect performance.

Note that USB hubs, audio or optical disc peripherals are generally not supported.

3. Introduction to PACE iLok Smart Key

Amarra is protected with PACE's Anti-Piracy InterLok copy protection. Your iLok should come ready to use and you should only need to install the iLOK extension on your computer. There may be occasions when you need to setup an iLOK for new options or for replacement. Please ask your dealer for more information.

PACE iLok (Yours may be a different color)

Your Amarra license is authorized with an iLok USB Smart Key.

NOTE: Protect this device! This is really your Amarra product and if lost or stolen, can not be replaced without purchasing another Amarra license.

PACE offers a warranty for replacing lost or stolen iLoks called 'Zero Downtime'. The iLok.com Zero Downtime program enables iLok owners to immediately replace licenses in case an iLok is broken, lost or stolen. Benefits of covering an iLok include:

- Immediate replacement of licenses in the event of disaster
- Priority support during replacement event
- Peace of mind

Contact your dealer, Sonic Studio, or log in to your iLok account for more information on Zero Downtime.

Replacement / New iLOK
If your iLok is new and needs to be authorized. Please request authorization from Sonic Studio for your iLok USB Smart Key, visit:

http://www.sonicstudio.com/register

Completing the form will generate an authorization request. We will then place a license for Amarra in your iLok account. Please fill out the form completely to avoid delay in authorization.

4. Installing Amarra Software

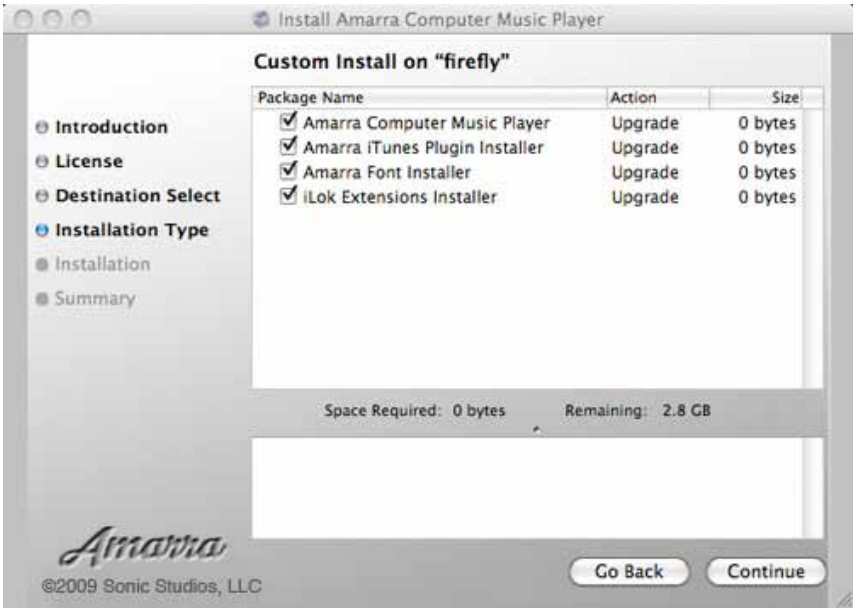
To install Amarra, insert the install disk in your computer then click on the Amarra_Installer icon. Follow the on screen instructions to install your software.

Welcome screen for Amarra Installer:

Install Amarra Computer Music Player
Welcome to the Amarra Computer Music Player Installer
Introduction
License
Destination Select
Installation Type
Installation
Summary
This installer is used to install all the software required to use the Amarra Computer Music Player.
The following installers are included:
- Amarra Application Installer
- Amarra iTunes Plugin Installer
- iLok Extension Installer
This is the Early Adopter and Demo Release.
In Demo Mode Amarra will introduce intermittent audio silence.
Amarra also requires an approved audio interface.
Sonic Studio offers to install the software for you using remote access.
Please contact support@sonicstudio.com to schedule your appointment.
Amarra
©2009 Sonic Studios, LLC
Go Back
Continue

Select Continue.

Installer Table of Contents:



Select Continue.

- Amarra Computer Music Player is installed into the Applications folder.
  It is installed here: ~/Applications/Amarra
- The Amarra iTunes Plugin facilitates the interaction between Amarra and iTunes.
  It is installed here: ~ /Library/iTunes/iTunes Plug-ins/
- The iLok Extensions are required to use the iLok USB Security key.
  The iLok extension is installed on your boot volume.
- Amarra Fonts installs fonts specific to the Amarra User Interface.
  They are installed here: ~/Library/Fonts/

Click Install.
(You will be prompted for your password and the software will be installed.)

Success!
Select the Close button to quit the Amarra installer.

5. Launching and Using Amarra

Open the Applications folder on your Mac, locate the Amarra folder.
This folder contains the Amarra application as well as documentation and an Extras folder.

Click on the arrow to the left to open the folder:

Amarra folder and the Amarra application.

NOTE: Double clicking on the Amarra icon launches Amarra and iTunes.

HINT: Drag and drop the Amarra application icon to your dock for easy launch.

Amarra and the Finder Dock. (For more information about the Dock, see the Help menu of your Mac.)
Using the Control Key to access the Contextual Menu allows control of different commands in Amarra.

6. 0 Using Amarra and iTunes

Amarra runs alongside Apple's iTunes program. This allows you to manage and access all your music through the main iTunes Music Library or through custom iTunes Playlists.

As shown below, Amarra occupies the area to the left of your iTunes window:

Amarra and iTunes side by side.

You use iTunes like you always have, select the songs / Playlists and play. Amarra follows what you do in iTunes and takes over playback whenever a full resolution uncompressed AIFF or WAV file ranging from 44.1-192 kHz sample rate (16-24 bits) is played. Amarra seamlessly switches to iTunes for playing back low-resolution compressed files such as MP3 or AAC type, then back again once a high resolution file is detected. Amarra **only** plays uncompressed files (i.e AIFF, and WAV) and Apple Lossless (ALAC).

Using the Playlist button Amarra allows you to load the selected tracks from iTunes into Amarra as a Playlist. With the Playlist loaded iTunes is Not Used and is now stopped. This is indicated by the Playlist button turning Green and now showing the Tracks that are loaded as a menu.

Note: This feature will play the loaded Playlist without any gaps.

Note: Amarra will load all tracks of the same sample rate and disable iTunes so the tracks can then be played in Amarra. This can provide optimal sound reproduction.

6.1 Using the Amarra Interface Module:

1. Amarra/iTunes Status Indicator
This indicates Amarra's playback status:
Blue = Amarra is playing the track
Orange = iTunes is playing the track

2. Amarra EQ
This opens (or closes) the Amarra EQ window. Option click to enable/disable Sonic EQ.
With Sonic Studio/Amarra Hardware you can also open the +DSP hardware based Sonic EQ.

3. Playlist Button
This buttom brings up the Playlist Window where tracks can be loaded and played.
This can be used to assemble music lists for gapless playback.
iTunes is no longer used during Playlist playback.

4. Tracks
This displays the list of tracks loaded in the current Playlist.

5. Device / File Information
The upper display shows the format, sample rate, and bit resolution of the current track.
The lower displays shows the current Audio device, Clock Source, and Hardware Sample Rate.
Current dither status is also displayed.

6. Transport Controls
The Previous Track, Play/Pause, and Next Track buttons. are located here.

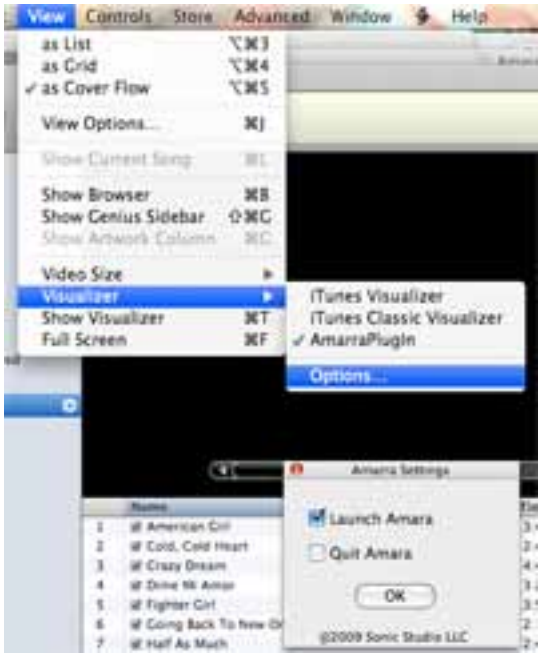
The same controls are in iTunes and can be used too.

7. Amarra Volume Control
This control slider controls the output volume of Amarra.
The buttons are hot spots for 0, -6, and -144 dB. The up and down buttons on your keyboard can be used to cotrol Amarra volume.

8. Meters and Output Level
These show meters and volume control for.

NOTE: Meters do not show activity when playing lo-res files from iTunes.

NOTE:
When you launch iTunes, Amarra will automatically launch. Likewise, when iTunes quits Amarra will be shutdown. In iTunes under Visual Plugin there is an Options menu command which can be used to disable the auto launch / quit feature.



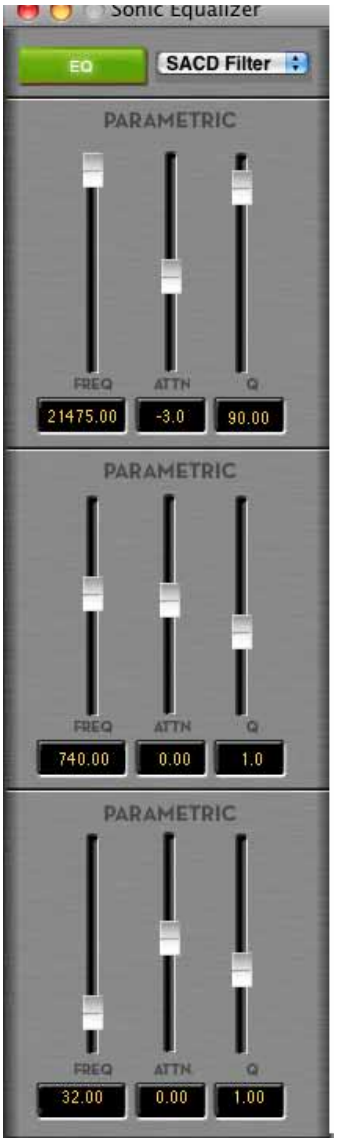
6.2. Using the Amarra EQ

This section presents an overview of the Amarra EQ. The Amarra Equalizer plug in is a powerful, very high quality minimal phase topology filter. It is uses are limited to your imagination.

The EQ is enabled by clicking on the EQ button at the top of the Amarra window:

The Equalizer Module:
Use this to alter the sonic characteristics of the sound. Amarra EQ employs a minimal phase topology and double precision operations to ensure inaudible results while preserving the fidelity of the most delicate acoustic performances.

EQ (**On/Off)**
This turns on Amarra EQ, or when unlit indicates the EQ is not being used.



PRESETS

PARAMETRIC 1

PARAMETRIC 2

PARAMETRIC 3

PRESETS:
Amarra comes with a set of EQ settings that are modelled on the iTunes presets. In addition there are 3 Room Node settings for common bass adjustment processing.

NOTE: Have a favorite EQ setting and want to save it for future use? The new Desk menu items allows you to save and recall your EQ settings. Set up an EQ, go to the Desk menu and select Save Sonic EQ Set Up... for easy recall using the Open Sonic EQ... item.

Parametric EQ :
The parametric filter has parameters for Resonant Frequency, Gain and Quality Factor. The Quality Factor, or Q, is defined as the resonant frequency, or center frequency in the case of a symmetrical filter, divided by the bandwidth. The filter is a 1st Order filter.

Amarra provides three parametric filters to tailor your sound: . All processing is done using 64bit floating point arithmetic. The parametric filters are classic, three parameter versions, with Resonant Frequency, gain, and Q. Q or Quality Factor is defined as the resonant frequency, or center frequency in the case of a symmetrical filter, divided by the bandwidth. The bandwidth is, in turn, defined as the one or two frequencies at which the filter response is 3 dB up or down from unity gain.

The Amarra EQ Window also has a set of presets based on common Room Nodes for correcting simple room acoustics. Additional presets are based on an analysis of iTunes EQ Presets. Amarra uses the Sonic EQ to process the audio and provide the selected effect.. The following presets are provided:

Default User Setting
Acoustic
Bass Booster
Bass Reducer
Classical
Jazz
Pop
R & B
Rock
Flat
Room Node = 30 Hz
Room Node = 40 Hz
Room Node = 50 Hz
SACD Filter

Expressing the width of a filter as a Quality Factor, rather than bandwidth, provides a more intuitive sense of the filter's subjective "sound," since the same value of Q will produce different bandwidths at different frequencies. The higher the frequency, the wider the bandwidth will be for a given Q value, which roughly corresponds to our auditory mechanism's ability to perceive a filter's action.

As an example, a parametric filter with a Q of 1 has a bandwidth of 100 Hz when its center frequency is set to 100 Hz but, it has a bandwidth of 1000 Hz when the center frequency is set to 1000 Hz.

Curves for Parametric EQ ::
The family of curves shown below include a wide Q of 0.5, a medium Q of 2.0 and a narrow Q of 10. The order or slope of this filter is 6 dB per octave.

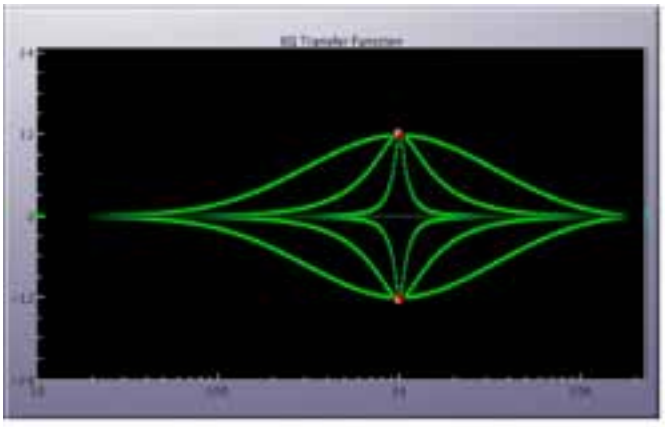


Figure 10.2: 1st order parametric with f_c of 1000 Hz

6.3. Amarra Preferences

This section presents an overview of the Amarra Preferences.

Playback Settings

Bypass Compressed Files ::
Disable compressed format playback. Useful for Pre-Intel Macs that may not support this feature.

Enable Auto-Dither ::
Enables Dither when using the Amarra Volume Control.

Output Wordlength ::
When dither is enabled, sets the output wordlength transmitted to your DAC (16, 20, 24 bits.)

Tracks To Load ::
Sets the number of tracks to load when using AutoPilot

Amarra Launch Settings

Launch / Quit iTunes::
Automatically launches iTunes on Amarra startup.

Hide On Launch ::
Hides the Amarra window on launch.

Sonic Hardware Settings

When Sonic Hardware is connected additional features are enabled.

Dim Front Panel::
Dims the Front Panel on the Amarra Model 4, 304 and 305

Launch / Quit Console::
Launch Sonic Console for Amarra on startup. Quit on shutdown.

Monitor Control::
Controls the Hardware Volume directly from Amarra

Gain Level ::
Adjustment to Output Level

Amarra provides a built-in Dither that can be used to adjust the dither processing for audio playback. If Dither is enabled then the output of Amarra will be dithered to the setting of the Output Wordlength specified. This can be useful for providing the a better sound when Gain is used or if your DAC only supports a limited word length (16 or 20 bits).

NOTE: When the Output Wordlength is set to 24 bits the dither will be "disabled" if the Gain has not been modified (at full volume). Once the Gain is adjusted then dither is re-enabled.

The Amarra preference "**Launch iTunes**" will enable the automatic launch of iTunes on starting Amarra.

The Amarra preference "**Launch Remote**" will enable the launch the Amarra Remote application.

The Amarra preference "**Hide On Launch**" will hide Amarra after booting

6.4. Using Amarra with remote control

The Amarra Remote Application is used to support the Apple Infrared Remote. The Amarra Remote Application can be found in your Extras Folder and is only required for the infrared.

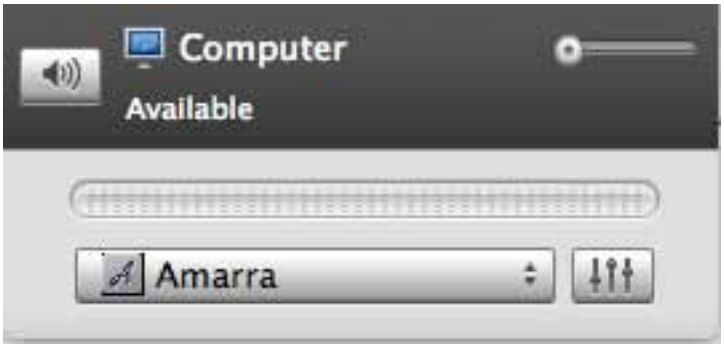
We strongly recommended the "rowmote" iPhone/iTouch Application available via the iApp Store.
For more information please visit http://www.rowmote.com/Rowmote/Rowmote.html

You can also use your iTouch / iPhone iTunes Remote Application to control Amarra but the Volume Control will interfere with correct Amarra operation.

NOTE: You can not control the volume using the Apple iTunes Remote application.
You must use "rowmote" for remote volume control.

6.5 Using your Airport Express

Using the "Airfoil" application from Roque Amoeba allows you to route the output of Amarra to an Airport Express. For more information visit http://www.rogueamoeba.com/airfoil/mac/ for more information.



6.6 Using Playlist Mode

Amarra Playlist

Amarra Playlist

Amarra provides its own Playlist window that can be used to control playback of soundfiles instead of iTunes. Tracks can be loaded via a selection iTunes (from the Library, from an iTunes Playlist or from a CD) or using the Finder. You can also Drag and Drop files on the Playlist to add them.

Playlist Navigation ::
Left Arrow = skip to next track and play it
Right Arrow = skip to previous track and play it
Down or Up Arrow = move to another track without stopping playback of current track. Hitting the

Return key or spacebar 2 times stops the current track's playback and starts playback of the newly selected song.

AutoPilot
You can use AutoPilot to load consecutive tracks from iTunes. Amarra will load 10, 20, or 40 tracks (based on the preference setting). When the tracks are finished playing Amarra will then loaded the next set of tracks.

Open Via iTunes / Open Files
Files are added from iTunes or from the Finder using these commands. Based on the AutoPilot setting either Selected Tracks or Consecutive Tracks will be loaded.

The Open Files will prompt you to selected files to load.

Clear
Clears the current Playlist.

Open Playlist / Save Playlist
Playlists can be saved and opened for later use.

NOTE: Inserting a CD into your Mac's drive can yield stunning results when played back through an Amarra Playlist. Simply select the CD in the left margin of iTunes, then press the Open Via iTunes button in Amarra.

7. Registering Your Amarra Software

In order to receive warranty service, you must register your product with Sonic Studio. This may be done at any time with proof-of-purchase. We strongly recommend that you register with Sonic Studio as soon as you purchase your unit. This will ensure the best possible support for your purchase.

1. Your product will be registered with us.
   Registration is used as proof of ownership if your product is ever lost or stolen.

2. Sonic Studio updates Amarra software on a regular basis.
   This allows us to keep you informed of updates as they become available.

Please register your Amarra software using our automated registration Web page at:
http://www.sonicstudio.com/register

Alternatively, our mail address is:
Amarra Software registration
Sonic Studio, LLC
330 Sir Frances Drake Blvd
Suite A
San Anselmo, CA USA
94960-2552
Fax 1-775-330-8923

If you encounter issues using Amarra please refer to the information below for assistance. If none of these steps address your problem please contact your dealer or Sonic Studio support for more help.

8. Troubleshooting Guide

Basic Macintosh Setup Tips

iTunes:

- Disable the Crossfade Songs preference in iTunes
- Disable the Sound Enhancer preference in iTunes
- Disable the Sound Check preference in iTunes

Energy Preferences

- Disable Sleep and other Energy saving Preferences.

Spotlight

- Disable Spotlight

TimeMachine

- Disable TimeMachine on your media drives.

- We highly recommend a fresh install of the operating on a clean disc.
  This can prevent problems later on.

- We also highly recommend that your computer be used exclusively for music playback.
  Email, web browsers, screen sharing and other applications can effect performance.

- Do not use FAT 32 formatted volumes.

See below for more information.

Issue: Amarra can not find iLOK.

Amarra does not find an iLOK, or finds an iLOK without a valid Amarra license.

Solution:

- Insert an iLOK with a valid Amarra license on it.
- Make sure the iLOK extension for Amarra is installed.
- Please refer the Amarra Startup Guide for more information.

Issue: Amarra operates in demo mode.

Solution:

• Amarra requires a Certified Audio Interface to operate in non-demo mode.

Please review the currently supported interfaces on our website at
http://www.amarraaudio.com/Amarra/faq.html

Issue: How to set up a remote volume

Amarra does not support streaming of remote songs.
Amarra requires that all volumes be mounted on the computer as a shared volume.

Solution:

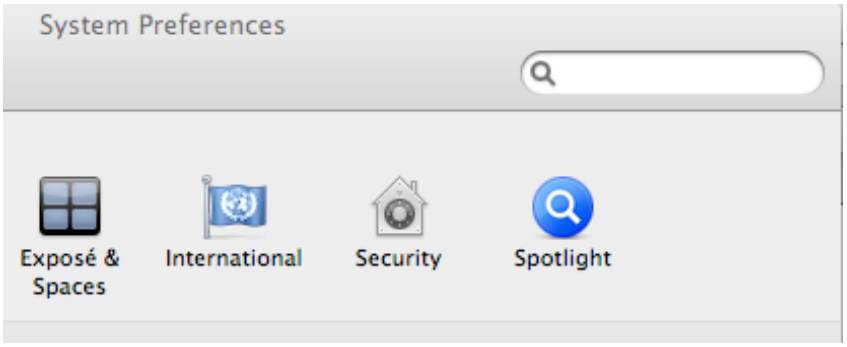
• Mount the remote volume with Read/Write Access on your local Macintosh
  - Use the Network (Cmd-K) to locate and mount the remote volume
• In iTunes used the Add to Library command to add the songs from the Mounted Volume
• Mount the remote volume with Read/Write Access on your local Macintosh

Issue: Audio Clicking or Ticking Sound.

Solution:

• Disable Spotlight (add volumes to the Spotlight Privacy Preference)

1) Open System Preferences and locate the Spotlight Preference



2) Select the Privacy Tab and add all your media drives

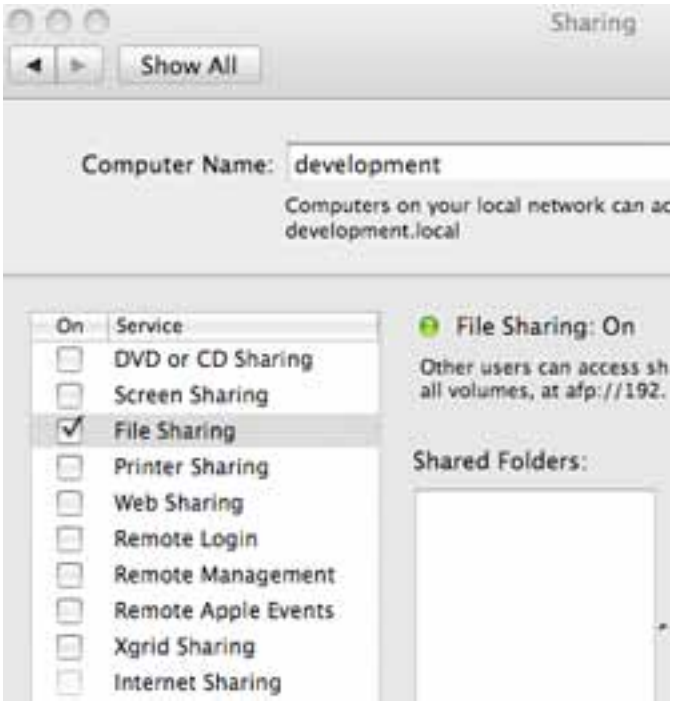
Spotlight
Show All
Spotlight helps you quickly find things on your computer. Spotlight is located at the top right corner of the screen.
Search Results
Privacy
Prevent Spotlight from searching these locations:
Click the Add button, or drag a folder or disk into the list below.
audio
DataStore
zeon

(cont.)

Solution:

- Disable Network Shared Access.

1) Open System Preferences and locate the Sharing Preference
2) Disabale Web Sharing, Remote Login and Remote Management.
   Please note for support the Remote Management preference may be required.



Solution:

- Disconnect multiple FireWire devices and reduce daisy-chained connections.

Solution:

- Shut down other applications such as email and browsers.

Solution:

- Increase the amount of RAM in your computer.

Solution:

- Check that all drives are HFS formatted.
  Amarra does not support FAT32 drives.

Solution:

- Change the Sample Rate manually using Audio Midi Setup to a different value.
  Then switch the Sample Rate back.

Issue: Songs do not change or sound correctly.

Solution:
- Disable the Crossfade Songs preference in iTunes
- Disable the Sound Enhancer preference in iTunes
- Disable the Sound Check preference in iTunes
- Disable Sleep and other Energy Preferences.

Issue: Amarra does not play audio.

Solution:
- Quit Amarra and iTunes and restart Amarra.

NOTE: Sound files with names that contain ":" or other foreign characters may not play properly. Changing the name of the soundfile can fix this.

Issue: Amarra does not play audio.

Amarra requires an input clock under Audio Midi Setup.
If your devices does not have an input when shown under AMS then please following the instructions for creating an Aggregate Device.

Solution:
- Create an Aggregate Device under Audio Mini Setup.

Please refer to the Aggregate Device Setup in the Documentation Folder.

Issue: Sample Rate Does Not Change With Soundfile.

Does your device support the sample rates for your music?
Amarra will only use the available rates on the device.
Otherwise, iTunes will be used (and sample rate conversion will occur).

9. Support

We are committed to your successful use of Amarra and offer support for Amarra through your local dealer or via phone and email through Sonic Studio. Please also ask your local dealer for assistance. They have a great deal of knowledge about Amarra and are an excellent resource.

For email support, send email to: support@sonicstudio.com

You can always find the latest information and updates for Amarra at our website:
http://www.amarraaudio.com

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